



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 130900**

**TO: Zohreh Fay**  
**Location: 3a61 / 3c70**  
**Thursday, September 02, 2004**  
**Art Unit: 1614**  
**Phone: 272-0573**  
**Serial Number: 10 / 614646**

**From: Jan Delaval**  
**Location: Biotech-Chem Library**  
**Rem 1A51**  
**Phone: 272-2504**  
  
**jan.delaval@uspto.gov**

### **Search Notes**

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Zohreh Fay Examiner #: 66646 Date: 10/6/99  
 Att Unit: 1614 Phone Number: 301-272-0578 Serial Number: 10/614/646  
 Mail Box and Bldg Room Location: 3C70/3A61 Results Format Preferred (circle): PAPER RISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Synergistic antimicrobial ophthalmic and dermatologic

Inventors (please provide full names): Preparations containing chlorite and Hydrogen peroxide  
Kadagoezian, Hampar

Earliest Priority Filing Date: 10/4/99

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

please search the claimed composition and  
method of use

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Qar</u>	NA Sequence (#) _____	STN <u>✓</u>
Searcher Phone #: <u>22504</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>9/12</u>	Bibliographic <u>✓</u>	Dr.Link _____
Date Completed: <u>9/12</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Searcher Prep Time: <u>60</u>	Patent Family _____	WWW/Internet _____
Online Fee: <u>175</u>	Other _____	Other (specify) _____

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 14:06:26 ON 02 SEP 2004  
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FILE COVERS 1907 - 2 Sep 2004 VOL 141 ISS 10  
FILE LAST UPDATED: 1 Sep 2004 (20040901/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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(FILE 'HOME' ENTERED AT 13:22:18 ON 02 SEP 2004)  
SET COST OFF

FILE 'REGISTRY' ENTERED AT 13:22:26 ON 02 SEP 2004

L1	1 S HYDROGEN PEROXIDE/CN
L2	1 S 13898-47-0
	SEL RN
L3	68 S E1/CRN
L4	33 S L3 AND (NA OR K OR CA OR MG)/ELS
L5	4 S L4 AND 2/NC
L6	5 S L4 AND H2O
L7	2 S BORIC ACID/CN
L8	2 S (SODIUM HYDROXIDE OR HYDROCHLORIC ACID)/CN
L9	1 S WATER/CN
L10	2 S (HYALURONIC ACID OR HYALURONIC ACID, SODIUM SALT)/CN

FILE 'HCAPLUS' ENTERED AT 13:26:00 ON 02 SEP 2004

L11	2801 S L2,L5,L6
L12	2736 S (NA OR K OR CA OR MG OR SODIUM OR POTASSIUM OR CALCIUM OR MAG
L13	193 S METAL CHLORITE
L14	24182 S CHLOROUS ACID OR CHLORITE
L15	24457 S L11-L14
	E METAL CHLORITE/CT
L16	82855 S L1
L17	174895 S H2O2 OR HYDROGEN PEROXIDE
L18	760 S L15 AND L16,L17
	E PEROX/CT
	E E59+ALL
L19	611 S E6,E5+NT AND L15
	E E4+ALL
L20	925 S E2+NT AND L15
L21	49 S PEROXY AND L15
L22	1206 S L18-L21
L23	56 S L22 AND (L7 OR BORIC ACID OR BORATE)

FILE 'REGISTRY' ENTERED AT 13:31:42 ON 02 SEP 2004

L24 1 S 14998-27-7  
 L25 25 S 14998-27-7/CRN

FILE 'HCAPLUS' ENTERED AT 13:32:19 ON 02 SEP 2004

L26 87 S L24 AND L16,L17  
 L27 204 S L24 AND E2+NT  
 L28 216 S L26,L27  
 L29 21 S L28 AND (L7 OR BORIC ACID OR BORATE)  
 L30 58 S L23,L29  
 L31 1257 S L22,L28

FILE 'REGISTRY' ENTERED AT 13:33:39 ON 02 SEP 2004

L32 1 S SODIUM CHLORIDE/CN

FILE 'HCAPLUS' ENTERED AT 13:33:43 ON 02 SEP 2004

L33 12 S L31 AND H3BO3  
 L34 59 S L30,L33  
 L35 100 S L31 AND (L32 OR (NA OR SODIUM) () CHLORIDE OR NACL)  
 L36 301 S L31 AND (L8 OR HCL OR NAOH OR (NA OR SODIUM) () HYDROXIDE OR HC  
 L37 28 S L34 AND L35,L36  
 L38 4 S L37 AND L35 AND L36  
     SEL DN AN 3  
 L39 1 S L38 AND E1-E3  
 L40 4 S L31 AND L10  
 L41 4 S L31 AND (HYALURONIC ACID OR (NA OR SODIUM) () HYALURON?)  
 L42 5 S L39-L41  
 L43 2 S L42 AND (L7 OR BORIC ACID)  
 L44 4 S L30 AND L42  
 L45 5 S L42,L43,L44  
     E KARAGOEZIAN H/AU  
 L46 3 S E4  
 L47 3 S L46 AND L31  
 L48 5 S L45,L47  
 L49 235 S L18 AND (HCL OR NAOH OR NACL OR H3BO3 OR BORIC ACID OR SODIUM  
 L50 4 S L49 AND LUBRIC?  
     E LUBRICANT/CT  
     E E5+ALL  
 L51 3 S L49 AND E2+NT  
 L52 31 S L49 AND SURFACTANT  
     E SURFACTANT/CT  
     E E29+ALL  
 L53 29 S L49 AND E2+OLD,NT,PFT,RT  
 L54 42 S L50-L53  
 L55 46 S L48,L54  
 L56 30 S L55 AND (PD<=19991004 OR PRD<=19991004 OR AD<=19991004)  
 L57 30 S L47,L56  
 L58 27 S L56 NOT L47  
 L59 10 S L58 AND PH  
     SEL DN AN 6  
 L60 1 S L59 AND E1-E3  
     SEL DN AN L59 9  
 L61 1 S E4-E5 AND L59  
 L62 5 S L47,L60,L61 AND L11-L23,L26-L31,L33-L61  
 L63 1043 S L31 AND (PD<=19991004 OR PRD<=19991004 OR AD<=19991004)  
 L64 3 S L63 AND EYE+OLD,NT,PFT,RT/CT  
 L65 5 S L63 AND EYE, DISEASE+OLD,NT,PFT,RT/CT  
 L66 6 S L63 AND CONTACT(L) LENS  
 L67 8 S L64-L66  
     SEL DN AN 4-8  
 L68 3 S L67 NOT E7-E21  
 L69 5 S L62,L68  
 L70 59 S L63 AND (WOUND OR BURN OR ?INFECT? OR ?ULCER? OR COLD SORE OR  
 L71 11 S L63 AND SKIN+OLD,NT,PFT,RT/CT

L72 10 S L63 AND SKIN, DISEASE+OLD,NT,PFT,RT/CT  
 L73 4 S L63 AND (BURN? OR ULCER? OR INFECT? OR ANTIINFECT?)/CW  
 L74 63 S L70-L73  
 L75 4 S L69 AND L74  
 L76 59 S L74 NOT L69,L75  
 SEL DN AN 7 13 16 50  
 L77 4 S L76 AND E22-E33  
 L78 9 S L69,L75,L77  
 L79 0 S L78 AND NAOCL  
 L80 3 S L78 AND NACLO#  
 L81 2 S L78 AND CLO2  
 L82 9 S L78,L80,L81  
 L83 8 S L82 AND (HCL OR NAOH OR NACL OR PH OR H2O OR WATER)  
 L84 9 S L82,L83

FILE 'HCAPLUS' ENTERED AT 14:06:26 ON 02 SEP 2004

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L84 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2004:162219 HCAPLUS  
 DN 140:187432  
 ED Entered STN: 29 Feb 2004  
 TI Synergistic antimicrobial ophthalmic and dermatologic preparations  
 containing **chlorite** and **hydrogen peroxide**  
 IN **Karagoezian, Hampar L.**  
 PA USA  
 SO U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 911,638.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM A61K033-40  
 ICS A61K033-14  
 NCL 424616000; 424661000  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 1  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004037891	A1	20040226	US 2003-614646	20030707 <--
	US 2002064565	A1	20020530	US 2001-911638	20010723 <--
	<u>US 6592907</u>	B2	20030715		
PRAI	US 1999-412174	B2	19991004	<--	
	US 2001-911638	A2	20010723		

#### CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004037891	ICM	A61K033-40
	ICS	A61K033-14
	NCL	424616000; 424661000
US 2004037891	ECLA	A61K033/40 <--
US 2002064565	ECLA	A61K033/40 <--

AB An anti-microbial composition for providing a therapeutic application onto a living being is disclosed. The composition includes from about 0.001 weight % to about 0.20 weight % **chlorite** compound and from about 0.001 weight % to about 0.05 weight % **peroxy** compound. The anti-microbial composition of the present invention is composed to remain intact without being degraded to generate chlorine dioxide during storage at about a room temperature. The anti-microbial composition of the present invention is at a pH range between about 6.0 and about 8.8. A human patient having **psoriasis** plaques present on both arms was treated twice daily application to plaques on the left arm only, of a **chlorite/peroxide** solution

having the following formulation: **sodium chlorite** 0.06, **hydrogen peroxide** 0.01, **HPMC** 2.0, **boric acid** 0.15, **HCl** or **NaOH** to adjust **pH** 7.4 and purified **water** q.s. to volume 100%. The **chlorite** /**peroxide** treated **psoriatic** plaques on the right arm began to become less severe within 24 h of beginning treatment and had substantially disappeared within three days of beginning treatment. However, the **triamcinolone acetonide** treated **psoriatic** plaques present on the left arm remained unchanged and inflamed during the two week treatment period.

- ST synergistic antimicrobial ophthalmic dermatol **metal chlorite hydrogen peroxide**
- IT **Eye, disease**  
(allergic conjunctivitis; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT Polyelectrolytes  
(anionic; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT Polymers, biological studies  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(block; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT Lip  
(cold sore; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT **Skin, disease**  
(decubitus ulcer, diabetic; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT **Eye, disease**  
(dry; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT Drug delivery systems  
(gels; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT **Eye, disease**  
(keratitis, bacterial; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT **Chlorites**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(metal; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT Drug delivery systems  
(ophthalmic; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT **Skin, disease**  
(scar; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)
- IT **Acne**  
Antimicrobial agents  
Burn  
Contact lenses  
Infection  
Lubricants  
Psoriasis  
Skin, disease

**Surfactants****Ulcer****Wound**

(synergistic antimicrobial ophthalmic and dermatol. preps. containing chlorite and hydrogen peroxide)

**IT Hydroperoxides**

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synergistic antimicrobial ophthalmic and dermatol. preps. containing chlorite and hydrogen peroxide)

IT 7722-84-1, Hydrogen peroxide, biological studies 7758-19-2, Sodium chlorite 9004-61-9, Hyaluronic Acid 10043-35-3, Boric acid, biological studies 14314-27-3, Potassium chlorite 14674-72-7, Calcium chlorite 17188-11-3, Magnesium chlorite 106392-12-5, Pluronic F-68

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synergistic antimicrobial ophthalmic and dermatol. preps. containing chlorite and hydrogen peroxide)

IT 7722-84-1, Hydrogen peroxide, biological studies 7758-19-2, Sodium chlorite 9004-61-9, Hyaluronic Acid 10043-35-3, Boric acid, biological studies 14314-27-3, Potassium chlorite 14674-72-7, Calcium chlorite 17188-11-3, Magnesium chlorite

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(synergistic antimicrobial ophthalmic and dermatol. preps. containing chlorite and hydrogen peroxide)

RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

HO—OH

RN 7758-19-2 HCAPLUS

CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl—OH

● Na

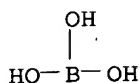
RN 9004-61-9 HCAPLUS

CN Hyaluronic acid (8CI, 9CI) (CA INDEX NAME)

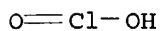
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 10043-35-3 HCAPLUS

CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)

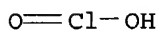


RN 14314-27-3 HCAPLUS  
 CN Chlorous acid, potassium salt (8CI, 9CI) (CA INDEX NAME)



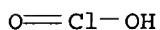
● K

RN 14674-72-7 HCAPLUS  
 CN Chlorous acid, calcium salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Ca

RN 17188-11-3 HCAPLUS  
 CN Chlorous acid, magnesium salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Mg

L84 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:409133 HCAPLUS  
 DN 136:406883  
 ED Entered STN: 31 May 2002  
 TI Synergistic antimicrobial ophthalmic and dermatologic preparations  
 containing chlorite and hydrogen peroxide  
 IN Karagoezian, Hampar L.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U. S. Ser. No. 412,174.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM A61K033-40  
 ICS A61K033-14  
 NCL 424661000  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 1

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002064565	A1	20020530	US 2001-911638	20010723 <--
	US 6592907	B2	20030715		
	WO 2003009802	A2	20030206	WO 2002-US19951	20020624
	WO 2003009802	A3	20031127		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,



UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 EP 1418881 A2 20040519 EP 2002-756279 20020624  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 US 2004037891 A1 20040226 US 2003-614646 20030707 <--  
 PRAI US 1999-412174 A2 19991004 <--  
 US 2001-911638 A 20010723  
 WO 2002-US19951 W 20020624

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002064565	ICM	A61K033-40
	ICS	A61K033-14
	NCL	424661000
US 2002064565	ECLA	A61K033/40 <--
US 2004037891	ECLA	A61K033/40 <--
AB	An anti-microbial liquid ophthalmic composition for direct application onto an eye comprises (by weight) about 0.02-0.20% <b>chlorite</b> compound and about 0.005-0.01% <b>peroxy</b> compound, at a pH between about 7.0 and 7.8. Preferably, the <b>chlorite</b> compound is a <b>metal chlorite</b> where the metal is chosen from sodium, potassium, calcium, and magnesium, while the <b>peroxy</b> compound is <b>hydrogen peroxide</b> . Also included are methods for treating an eye <b>infection</b> through application of the composition to the eye, and for cleansing a <b>contact lens</b> in place on an eye through application of the composition to the <b>lens</b> .	
ST	<b>chlorite</b> peroxide antimicrobial synergistic soln dermatol ophthalmic	
IT	<b>Eye, disease</b> (allergic conjunctivitis; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	Polyelectrolytes (anionic, lubricants; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	<b>Skin preparations (pharmaceutical)</b> (antiulcer agents; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	Surfactants (block polymers; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	Polymers, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (block, surfactants; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	<b>Contact lenses</b> (cleansing; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	<b>Lip</b> (cold sore; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	
IT	<b>Eye</b> (cornea, edema, control of; synergistic antimicrobial ophthalmic and dermatol. preps. containing <b>chlorite</b> and <b>hydrogen peroxide</b> )	

IT Antiulcer agents  
(decubitus ulcer inhibitors; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Eye, disease  
(dry; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Toxins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(endotoxins, inhibition of; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Toxins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(exotoxins, inhibition of; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Eye  
(hyperemia, control of; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Eye, disease  
(infection; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Eye, disease  
(inflammation, control of; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Eye, disease  
(keratitis, bacterial; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Polymers, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(lubricants; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Drug delivery systems  
(solns., ophthalmic; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Drug delivery systems  
(solns., topical; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Antibacterial agents  
Antimicrobial agents  
Human  
Psoriasis  
Skin preparations (pharmaceutical)  
(synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Disinfectants  
Drug interactions  
(synergistic; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT Vein, disease  
(ulcer; synergistic antimicrobial ophthalmic and dermatol. preps. containing **chlorite** and **hydrogen peroxide**)

IT 9002-07-7, Trypsin 9004-06-2, Elastase

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibition of; synergistic antimicrobial ophthalmic and dermatol.  
preps. containing **chlorite** and **hydrogen peroxide**)

IT 9004-65-3, Hydroxypropyl methyl cellulose 9004-67-5, Methyl cellulose  
106392-12-5, Pluronic 127

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(synergistic antimicrobial ophthalmic and dermatol. preps. containing  
**chlorite** and **hydrogen peroxide**)

IT 7722-84-1, **Hydrogen peroxide**, biological  
studies 7758-19-2, **Sodium chlorite**  
14314-27-3, **Potassium chlorite**  
14674-72-7, **Calcium chlorite**  
14998-27-7, **Chlorite** 17188-11-3,  
**Magnesium chlorite**

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(synergistic antimicrobial ophthalmic and dermatol. preps. containing  
**chlorite** and **hydrogen peroxide**)

IT 9004-61-9, **Hyaluronic acid**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(synergistic antimicrobial ophthalmic and dermatol. preps. containing  
**chlorite** and **hydrogen peroxide**)

IT 7722-84-1, **Hydrogen peroxide**, biological  
studies 7758-19-2, **Sodium chlorite**  
14314-27-3, **Potassium chlorite**  
14674-72-7, **Calcium chlorite**  
14998-27-7, **Chlorite** 17188-11-3,  
**Magnesium chlorite**

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(synergistic antimicrobial ophthalmic and dermatol. preps. containing  
**chlorite** and **hydrogen peroxide**)

RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

HO-OH

RN 7758-19-2 HCAPLUS

CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● Na

RN 14314-27-3 HCAPLUS

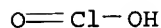
CN Chlorous acid, potassium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● K

RN 14674-72-7 HCAPLUS

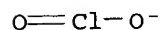
CN Chlorous acid, calcium salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Ca

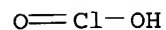
RN 14998-27-7 HCAPLUS

CN Chlorite (8CI, 9CI) (CA INDEX NAME)



RN 17188-11-3 HCAPLUS

CN Chlorous acid, magnesium salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Mg

IT 9004-61-9, Hyaluronic acid

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(synergistic antimicrobial ophthalmic and dermatol. preps. containing  
chlorite and hydrogen peroxide)

RN 9004-61-9 HCAPLUS

CN Hyaluronic acid (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L84 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:911028 HCAPLUS

DN 134:41437

ED Entered STN: 29 Dec 2000

TI Aqueous **disinfecting** solution

IN Shpetim, Tare Shyti

PA Italy

SO PCT Int. Appl., 12 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A23B007-157

ICS A23L003-358; A23L003-3472; A01N059-04; A01N059-04; A01N059-00

CC 17-4 (Food and Feed Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000078153	A1	20001228	WO 2000-IB805	20000616 <--
	W:	AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRAI	IT 1999-BS61	A	19990618	<--	

IT 1999-RS19 A 19990806 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000078153	ICM	A23B007-157
	ICS	A23L003-358; A23L003-3472; A01N059-04; A01N059-04; A01N059-00

AB A surface active **disinfecting**, microbicidal and hygienizing aqueous solution containing active oxygen and a bicarbonate of an alkaline metal is employed for washing fruits and vegetables.

ST **disinfecting** soln oxygen bicarbonate fruit vegetable

IT Bicarbonates  
Chlorates  
**Perchlorates**  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(alkali metal; aqueous **disinfecting** solution)

IT Antibacterial agents  
Electrolysis  
Fruit  
Sterilization and **Disinfection**  
Vegetable  
Washing  
(aqueous **disinfecting** solution)

IT **Peroxides, biological studies**  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(aqueous **disinfecting** solution)

IT Alkali metals, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(chlorates and perchlorates; aqueous **disinfecting** solution)

IT Plant (Embryophyta)  
(edible, exts.; aqueous **disinfecting** solution)

IT Group VIA element compounds  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(ozonides; aqueous **disinfecting** solution)

IT 7439-95-4, Magnesium, biological studies 7440-70-2, Calcium, biological studies **7722-84-1, Hydrogen peroxide**, biological studies 7782-44-7D, Oxygen, active, biological studies 10028-15-6, Ozone, biological studies **14998-27-7, Chlorite**  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(aqueous **disinfecting** solution)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Alesi, C; US 5330964 A 1994 HCAPLUS
- (2) Church & Dwight Co Inc; WO 9322920 A 1993 HCAPLUS
- (3) Devic, M; US 5480788 A 1996
- (4) Gallo, J; US 5858435 A 1999 HCAPLUS
- (5) Hutton, H; WO 9803624 A 1998 HCAPLUS
- (6) Innovest Ag; WO 9621360 A 1996
- (7) Solvay Interlox Ltd; WO 9406294 A 1994 HCAPLUS
- (8) Teppet; US 1534289 A 1925 HCAPLUS
- (9) Yost, K; JOURNAL OF FOOD PROTECTION 1995, V58, P34

IT **7722-84-1, Hydrogen peroxide**, biological studies **14998-27-7, Chlorite**  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(aqueous **disinfecting** solution)

RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

RN 14998-27-7 HCAPLUS  
 CN Chlorite (8CI, 9CI) (CA INDEX NAME)

O=Cl-O-

L84 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:240923 HCAPLUS  
 DN 132:270089  
 ED Entered STN: 14 Apr 2000  
 TI Synergistic antimicrobial, dermatological and ophthalmic preparations  
 containing **chlorite** and **hydrogen peroxide**  
 IN Karagoezian, Hampar L.  
 PA USA  
 SO PCT Int. Appl., 37 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC A61K009-127; A61K033-40; A01N025-00; A01N059-08; A01N059-14  
 CC 63-6 (Pharmaceuticals)  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000019981	A1	20000413	WO 1999-US23291	19991006 <--	
	W:			AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW		
	RW:			AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE		
	AU 9964169	A1	20000426	AU 1999-64169	19991006 <--	
	EP 1119347	A1	20010801	EP 1999-951810	19991006 <--	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
	JP 2003522109	T2	20030722	JP 2000-573343	19991006 <--	
	US 6488965	B1	20021203	US 2000-722919	20001127 <--	
PRAI	US 1998-169620	A	19981008	<--		
	US 1999-412174	A	19991004	<--		
	WO 1999-US23291	W	19991006			

# CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2000019981	IC	A61K009-127IC A61K033-40IC A01N025-00IC A01N059-08IC A01N059-14
US	6488965	ECLA	A01N059/00; A61K009/00M16; A61K033/40; A61K047/02 <--
AB	Disclosed are antimicrobial/pharmaceutical preps. (e.g., solns., gels, ointments, creams, sustained release preps., etc.) which include <b>chlorite</b> (e.g., a metal salt of a <b>chlorite</b> ) in combination with a <b>peroxy</b> compound (e.g., <b>hydrogen peroxide</b> ), and methods for using such preps. for <b>disinfection</b> of articles or surfaces (e.g., <b>contact lenses</b> , counter tops, etc.), antiseptis of skin or other body parts, prevention or deterrence of <b>scar</b> formation and/or treatment and prophylaxis of dermal (i.e., skin or mucous membrane) disorders (e.g., <b>wounds</b> , <b>burns</b> , <b>infections</b> , <b>cold sores</b> , <b>ulcerations</b> , <b>psoriasis</b> , <b>acne</b> , or other <b>scar-forming</b> lesions). A gel containing <b>Na chlorite</b> 0.06, <b>H2O2</b> 0.01, hydroxypropyl Me cellulose 2, <b>boric acid</b> 0.15, <b>HCl</b> /		

NaOH q.s. to pH 7.4, and purified water q.s.  
to 100 % was formulated and applied on the affected arms to treat  
psoriasis plaques.

ST synergistic antimicrobial chlorite peroxide; skin eye disorder  
chlorite peroxide; disinfection contact  
lens chlorite peroxide

IT Eye, disease  
(allergic conjunctivitis, treatment of; synergistic  
antimicrobial preps. containing chlorites and peroxides)

IT Wound healing promoters  
(cicatrizants; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Lip  
(cold sore, treatment of; synergistic antimicrobial  
preps. containing chlorites and peroxides)

IT Skin, disease  
(decubitus ulcer, treatment of; synergistic  
antimicrobial preps. containing chlorites and peroxides)

IT Mucous membrane  
(disease, treatment of; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Contact lenses  
(disinfection of; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Eye, disease  
(dry, treatment of; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Drug delivery systems  
(gels, topical; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Drug delivery systems  
(liposomes, sustained-release; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Drug delivery systems  
(ointments, creams; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Drug delivery systems  
(ointments; synergistic antimicrobial preps. containing chlorites  
and peroxides)

IT Drug delivery systems  
(ophthalmic; synergistic antimicrobial preps. containing chlorites  
and peroxides)

IT Drug delivery systems  
(solns., topical; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Phospholipids, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sustained release matrix; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT Antibacterial agents  
Disinfectants  
Preservatives  
(synergistic antimicrobial preps. containing chlorites and  
peroxides)

IT Peroxides, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(synergistic antimicrobial preps. containing chlorites and  
peroxides)

IT Antimicrobial agents  
(synergistic; synergistic antimicrobial preps. containing  
chlorites and peroxides)

IT **Burn**  
**Psoriasis**  
**Skin, disease**  
(treatment of; synergistic antimicrobial preps. containing **chlorites** and peroxides)

IT 57-88-5, Cholesterol, biological studies 63-89-8,  
Dipalmitoylphosphatidylcholine 3036-82-6, Dipalmitoylphosphatidylserine  
9002-89-5, Polyvinyl alcohol 9003-39-8, Polyvinylpyrrolidone  
9004-32-4, Carboxymethyl cellulose 9004-35-7, Cellulose acetate  
9004-61-9, **Hyaluronic acid** 9004-62-0,  
Hydroxyethyl cellulose 9032-42-2, Methylhydroxyethyl cellulose  
9050-31-1, Hydroxypropyl methyl cellulose phthalate 25086-15-1,  
Methacrylic acid-methyl methacrylate copolymer 69670-80-0, Hydroxymethyl  
propyl cellulose  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sustained release matrix; synergistic antimicrobial preps. containing **chlorites** and peroxides)

IT 7722-84-1, **Hydrogen peroxide**, biological  
studies 7758-19-2, **Sodium chlorite**  
10049-04-4, Chlorine dioxide 14314-27-3, **Potassium chlorite** 14674-72-7, **Calcium chlorite**  
17188-11-3, **Magnesium chlorite**  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(synergistic antimicrobial preps. containing **chlorites** and peroxides)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Berger; US 4574084 A 1986 HCAPLUS  
(2) Danner; US 5855922 A 1999 HCAPLUS  
(3) Fujiwara; US 4670185 A 1987 HCAPLUS  
(4) Gordon; US 3585147 A 1971  
(5) Kross; US 4891216 A 1990 HCAPLUS  
(6) Laso; US 4317814 A 1982 HCAPLUS  
(7) Ripley; US 5306440 A 1994 HCAPLUS  
(8) Ripley; US 5736165 A 1998 HCAPLUS

IT 9004-61-9, **Hyaluronic acid**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sustained release matrix; synergistic antimicrobial preps. containing **chlorites** and peroxides)

RN 9004-61-9 HCAPLUS  
CN Hyaluronic acid (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 7722-84-1, **Hydrogen peroxide**, biological  
studies 7758-19-2, **Sodium chlorite**  
14314-27-3, **Potassium chlorite**  
14674-72-7, **Calcium chlorite**  
17188-11-3, **Magnesium chlorite**  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(synergistic antimicrobial preps. containing **chlorites** and peroxides)

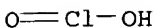
RN 7722-84-1 HCAPLUS  
CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

HO-OH

RN 7758-19-2 HCAPLUS



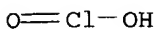
CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)



● Na

RN 14314-27-3 HCAPLUS

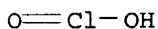
CN Chlorous acid, potassium salt (8CI, 9CI) (CA INDEX NAME)



● K

RN 14674-72-7 HCAPLUS

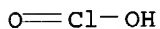
CN Chlorous acid, calcium salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Ca

RN 17188-11-3 HCAPLUS

CN Chlorous acid, magnesium salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Mg

L84 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:124238 HCAPLUS

DN 132:139421

ED Entered STN: 24 Feb 2000

TI Manufacture of stable chlorine dioxide

IN Ding, Zhangxun; Ding, Wenjie

PA Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.

CODEN: CNXXEV

DT Patent

LA Chinese

IC ICM C01B011-02

CC 49-8 (Industrial Inorganic Chemicals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	CN 1185417	A	19980624	CN 1996-118919	19961218 <--
	CN 1052957	B	20000531		
PRAI	CN 1996-118919		19961218	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 1185417	ICM	C01B011-02

AB The chlorine dioxide is manufactured by mixing chlorine dioxide-generating reactants with extractant selected from aliphatic or aromatic hydrocarbons and solvent gasoline in a reactor under stirring, directly absorbing the chlorine dioxide with the extractant, separating from other reaction product, adding sodium carbonate and **hydrogen peroxide** to the solution, separating to obtain high-concentration and stable product. The reactants are selected from **sodium chlorite**, **HCl**, **H<sub>2</sub>SO<sub>4</sub>**, **NaCl**, and **chlorous acid**. The chlorine dioxide is used as **disinfectant**.

ST chlorine dioxide manuf **disinfectant**

IT Aromatic hydrocarbons, uses  
Hydrocarbons, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(extractant; in manufacture of stable chlorine dioxide)

IT Extraction  
(in manufacture of stable chlorine dioxide)

IT **Disinfectants**  
(manufacture of stable chlorine dioxide for)

IT 497-19-8, Sodium carbonate, reactions 7647-01-0, Hydrochloric acid, reactions 7647-14-5, Sodium chloride, reactions 7664-93-9, Sulfuric acid, reactions 7722-84-1, **Hydrogen peroxide**, reactions 7758-19-2, **Sodium chlorite** 13898-47-0, **Chlorous acid**  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); TEM (Technical or engineered material use); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
(in manufacture of stable chlorine dioxide)

IT 10049-04-4P, Chlorine dioxide  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, stable chlorine dioxide)

IT 7722-84-1, **Hydrogen peroxide**, reactions 7758-19-2, **Sodium chlorite** 13898-47-0, **Chlorous acid**  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); TEM (Technical or engineered material use); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
(in manufacture of stable chlorine dioxide)

RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) (9CI) (CA INDEX NAME)

HO-OH

RN 7758-19-2 HCAPLUS

CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● Na

RN 13898-47-0 HCAPLUS

CN Chlorous acid (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

L84 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:795454 HCAPLUS  
 DN 132:37673  
 ED Entered STN: 17 Dec 1999  
 TI High-purity alkali metal chlorite and its manufacture  
 IN Dick, Peter David; Cowley, Gerald  
 PA Sterling Canada, Inc., USA  
 SO Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C01B011-10  
 CC 49-5 (Industrial Inorganic Chemicals)  
 Section cross-reference(s): 43, 61

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 963945	A1	19991215	EP 1999-850102	19990609 <--
	EP 963945	B1	20030115		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2273667	AA	19991209	CA 1999-2273667	19990607 <--
	US 6251357	B1	20010626	US 1999-327529	19990608 <--
	ZA 9903884	A	20000718	ZA 1999-3884	19990609 <--
	AT 231105	E	20030215	AT 1999-850102	19990609 <--
	ES 2194435	T3	20031116	ES 1999-850102	19990609 <--
PRAI	US 1998-88542P	P	19980609	<--	

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP	963945	ICM	C01B011-10
AB	An alkali metal chlorite, particularly NaClO2, is produced with a low carbonate level by combining a ClO2-generating system operating at subatmospheric pressure with a chlorite-formation reactor in which the ClO2 reacts with H2O2 in the presence of aqueous alkali metal hydroxide, particularly NaOH. The high-purity product is suitable for conversion to ClO2 which can be used for water disinfection or pulp bleaching.		
ST	alkali metal chlorite manuf; sodium chlorite manuf chlorine dioxide		
IT	1310-73-2, Sodium hydroxide, processes 7722-84-1, Hydrogen peroxide, processes 10049-04-4, Chlorine dioxide		
	RL: PEP (Physical, engineering or chemical process); PROC (Process) (in sodium chlorite manufacture)		
IT	7758-19-2P, Sodium chlorite		
	RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process) (manufacture from chlorine dioxide)		

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Engstroem, J; US 5091167 A 1992 HCAPLUS
- (2) Farbwerke Hoechst AG; CH 373740 A 1964
- (3) Japan Carlit Co Ltd:THE; JP 56092102 A 1981 HCAPLUS
- (4) Mason, J; US 5639559 A 1997 HCAPLUS
- (5) Swindells, R; US 4081520 A 1978 HCAPLUS
- (6) Vincent, G; US 2092944 A 1937 HCAPLUS

IT 7722-84-1, **Hydrogen peroxide**, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (in **sodium chlorite** manufacture)  
 RN 7722-84-1 HCAPLUS  
 CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

HO-OH

IT 7758-19-2P, **Sodium chlorite**  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)  
 (manufacture from chlorine dioxide)  
 RN 7758-19-2 HCAPLUS  
 CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● Na

L84 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:185881 HCAPLUS

DN 112:185881

ED Entered STN: 12 May 1990

TI Synergistic **disinfectants** comprising **chlorites**,  
 chlorates and chlorides

IN Gordon, Gilbert

PA Bioxy International, Ltd., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM A01N039-00

ICS A01N059-00; A01N059-08; A01N059-14

NCL 424662000

CC 63-8 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4880638	A	19891114	US 1988-235378	19880823 <--
	WO 9001876	A1	19900308	WO 1989-US3555	19890817 <--
	W: JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	CA 1337515	A1	19951107	CA 1989-608956	19890822 <--
PRAI	US 1988-235378		19880823	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4880638	ICM	A01N039-00
	ICS	A01N059-00; A01N059-08; A01N059-14
	NCL	424662000

AB Compns. comprising Cl-, ClO2- and ClO3- at well-defined ratios, are synergistic **disinfectants**. The compns. also comprise compds. that retard the formation of ClO2, such as peroxides, **borates**, perborates and percarbonates. A solution (pH 13; NaOH) of NaClO2 950, NaClO3 300, NaCl 350, Na borate 25, Na2SO4 25 and H2O2 20 g in 12 L

water was a **disinfectant**. The solution killed  
 Campylobacter fetus jejuni in vitro, even at 10-fold dilution

ST **disinfectant** synergism chloride **chlorite** chlorate

IT Alkali metal chlorides  
 Chlorates  
**Chlorites**  
 RL: BIOL (Biological study)  
 (disinfectants containing, synergistic)

IT **Borates**  
 Perborates  
**Peroxides, biological studies**  
 RL: BIOL (Biological study)  
 (stabilizers, for chlorine disinfectants)

IT Bactericides, **Disinfectants**, and Antiseptics  
 (synergistic, **chlorites**- and chlorides- and chlorates-containing)

IT 7775-09-9 16887-00-6, Chloride, biological studies  
 RL: BIOL (Biological study)  
 (disinfectant)

IT 7647-14-5, Sodium chloride (NaCl),  
 biological studies 7758-19-2 14866-68-3, Chlorate  
 14998-27-7, **Chlorite**  
 RL: BIOL (Biological study)  
 (disinfectant containing)

IT 7722-84-1, Hydrogen peroxide (H2O2),  
 biological studies  
 RL: BIOL (Biological study)  
 (stabilizer, for chlorine disinfectants)

IT 563-69-9D, Carbonoperoxoic acid, derivs.  
 RL: BIOL (Biological study)  
 (stabilizers, for chlorine disinfectants)

IT 7647-14-5, Sodium chloride (NaCl),  
 biological studies 7758-19-2 14998-27-7,  
**Chlorite**  
 RL: BIOL (Biological study)  
 (disinfectant containing)

RN 7647-14-5 HCAPLUS

CN Sodium chloride (NaCl) (9CI) (CA INDEX NAME)

Cl-Na

RN 7758-19-2 HCAPLUS

CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● Na

RN 14998-27-7 HCAPLUS

CN Chlorite (8CI, 9CI) (CA INDEX NAME)

O=Cl-O<sup>-</sup>

IT 7722-84-1, Hydrogen peroxide (H2O2),  
 biological studies  
 RL: BIOL (Biological study)

(stabilizer, for chlorine disinfectants)

RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

HO-OH

L84 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:137809 HCAPLUS

DN 102:137809

ED Entered STN: 20 Apr 1985

TI Modified aqueous chlorite solution and its use

IN Berger, Peter

PA Fed. Rep. Ger.

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA German

IC C01B011-00; A01N059-00; A01N025-22

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 61

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8403274	A1	19840830	WO 1984-EP46	19840223 <--
	W: AU, BR, JP, US				
	RW: AT, BE, CH, FR, GB, LU, NL, SE				
	DE 3403631	A1	19840830	DE 1984-3403631	19840202 <--
	DE 3403631	C2	19890223		
	AU 8425727	A1	19840910	AU 1984-25727	19840223 <--
	AU 566830	B2	19871029		
	BR 8405351	A	19850212	BR 1984-5351	19840223 <--
	JP 60500572	T2	19850425	JP 1984-500956	19840223 <--
	JP 06102522	B4	19941214		
	AT 26965	E	19870515	AT 1984-900857	19840223 <--
	CA 1224415	A1	19870721	CA 1984-461618	19840823 <--
	US 4574084	A	19860304	US 1984-668273	19841024 <--
PRAI	DE 1983-3306753		19830225	<--	
	DE 1983-3307569		19830303	<--	
	DE 1984-3403631		19840202	<--	
	EP 1984-900857		19840223	<--	
	WO 1984-EP46		19840223	<--	

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 8403274	IC	C01B011-00IC A01N059-00IC A01N025-22
AB	A stabilized aqueous chlorite solution composition is prepared by the addition of		
	a peroxy compound (up to a pH value of 7) and is useful for the treatment of skin diseases and purification of water. Into 1 ,		
	L water containing 0.5 30% aqueous H2O2 solution was added 0.9 L NaClO2 solution (300 g/L). The solution turns brown which at pH		
	> 7 acquires a green color. The solution thus obtained at 0.1-0.5% is useful for the treatment of skin diseases. The water quality is also improved by adding the solution		
ST	chlorite soln skin disease; skin disease chlorite soln; water treatment chlorite soln; peroxide chlorite soln		
IT	Water purification (chlorite solns. for)		
IT	Perborates		

Peroxides, biological studies  
 Peroxycarbonates  
 Peroxysulfates  
 RL: BIOL (Biological study)  
 (solns. containing **chlorite** and, for skin diseases and  
 water treatment)  
 IT **Skin, disease or disorder**  
 (treatment of, with aqueous **chlorite** solns.)  
 IT 7722-84-1, biological studies  
 RL: BIOL (Biological study)  
 (solns. containing **chlorite** and, for skin diseases and  
 water treatment)  
 IT 7758-19-2  
 RL: BIOL (Biological study)  
 (solns. containing **peroxy** compds. and, for skin diseases and  
 water treatment)  
 IT 7722-84-1, biological studies  
 RL: BIOL (Biological study)  
 (solns. containing **chlorite** and, for skin diseases and  
 water treatment)  
 RN 7722-84-1 HCAPLUS  
 CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)

HO-OH

IT 7758-19-2  
 RL: BIOL (Biological study)  
 (solns. containing **peroxy** compds. and, for skin diseases and  
 water treatment)  
 RN 7758-19-2 HCAPLUS  
 CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● Na

L84 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1972:407209 HCAPLUS  
 DN 77:7209  
 ED Entered STN: 12 May 1984  
 TI Continuous bleaching of unrefined or refined cotton yarns  
 IN Santo, Yoshikazu; Mori, Shigeru; Ishidoshiro, Hiroshi  
 PA Santo Iron Works Co., Ltd.  
 SO Jpn. Tokkyo Koho, 4 pp.  
 CODEN: JAXXAD  
 DT Patent  
 LA Japanese  
 IC D06L  
 CC 39-9 (Textiles)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 46023594	B4	19710706	JP 1967-55659	19670830 <--

CLASS  
 PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES  
 -----

JP 46023594 IC D06L  
 AB Mercerized cotton yarns were in parallel and continuously scoured and bleached with good quality control. Thus mercerized cotton yarns were first passed through a solution containing 1-2% (based on the whole liquid) Na chlorite [7758-19-2] and 0.3-0.5% anionic and (or) nonionic surfactant at pH 3.0-3.5 (adjusted with HCO<sub>2</sub>H), heated 10-20 min at 70-90.deg., washed with water, immersed in a solution containing 35% hydrogen peroxide [7722-84-1] 0.5-1.0, water glass 0.4-0.5, NaOH 0.07-0.1% (based on the whole liquid) at pH .sim.11.0, heated 10-20 min at 80-100.deg., washed and dried.  
 ST cotton continuous scouring; bleaching cotton  
 IT Bleaching  
     (of cotton yarn, continuous, with simultaneous scouring)  
 IT 7758-19-2  
     RL: USES (Uses)  
         (in bleaching-scouring of cotton yarns, continuous)  
 IT 7758-19-2  
     RL: USES (Uses)  
         (in bleaching-scouring of cotton yarns, continuous)  
 RN 7758-19-2 HCAPLUS  
 CN Chlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)

O=Cl-OH

● Na

=> => fil wpix

FILE 'WPIX' ENTERED AT 14:34:10 ON 02 SEP 2004  
 COPYRIGHT (C) 2004 THOMSON DERWENT

FILE LAST UPDATED: 1 SEP 2004 <20040901/UP>  
 MOST RECENT DERWENT UPDATE: 200456 <200456/DW>  
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[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

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 HIT STRUCTURES WITHIN THE BIBLIOGRAPHIC DOCUMENT <<<

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L118 ANSWER 1 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN



AN 2004-542693 [52] WPIX  
DNC C2004-199148  
TI Ophthalmic composition useful for treating human eye comprises **hyaluronic acid**, stabilized oxy-chloro complex and **boric acid/borate** buffer.  
DC A11 A17 A25 A96 D22  
IN COOK, J N; HUTH, S W  
PA (COOK-I) COOK J N; (HUTH-I) HUTH S W; (ADME-N) ADVANCED MEDICAL OPTICS INC  
CYC 108  
PI US 2004137079 A1 20040715 (200452)\* 11 A61K033-14 <--  
WO 2004062660 A1 20040729 (200452) EN A61K031-40  
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE  
LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW  
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE  
DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG  
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ  
OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG  
US UZ VC VN YU ZA ZM ZW  
ADT US 2004137079 A1 Provisional US 2003-438843P 20030108, Provisional US  
2003-438857P 20030108, US 2004-752759 20040107; WO 2004062660 A1 WO  
2004-US298 20040108  
PRAI US 2004-752759 20040107; US 2003-438843P 20030108;  
US 2003-438857P 20030108  
IC ICM A61K031-40; **A61K033-14**  
ICS A61K031-728; A61P027-00; A61P027-02  
AB US2004137079 A UPAB: 20040813  
NOVELTY - An ophthalmic composition (C1) comprises **hyaluronic acid** (H1) (0.005 - 0.5 w/v.%), stabilized oxy-chloro complex (S1) (0.0025 - 0.03 w/v.%) and **boric acid/borate** buffer (B1) to maintain a pH of 6 - 9. (C1) Comprises not more than 0.0075% **hydrogen peroxide**.  
ACTIVITY - Ophthalmological; Antimicrobial.  
MECHANISM OF ACTION - None given.  
USE - For treating human eye with or without contact lenses (claimed). Also useful as a storage and conditioning solution for contact lenses following disinfection.  
ADVANTAGE - (C1) Contains less than 0.005% or substantially no **hydrogen peroxide** and has osmolality of 140 - 400 (preferably 240 - 330, especially 270) mOsm/kg. (C1) Neutralizes positively charged antimicrobial and preservatives used in contact lens disinfecting solutions, thus enhancing comfort; is stable and resembles tear mucus by maintaining viscosity between the blinks enhancing the residence time, maintaining water on and round the lens; provides superior cushioning and relief from dryness and irritation associated with the contact lens; and has good efficacy against bacteria, yeast and fungi, yet mild to mammalian cells. (C1) Provides an increased length of comfort effect after using drops, greater comfort at the end of the day, and improves tear break-up time and longer lens wearing time during the day.  
Dwg.0/0  
FS CPI  
FA AB  
MC CPI: A03-A00A; A12-V01; D09-A01A  
TECH UPTX: 20040813  
TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Composition: In (C1), the balanced salts comprises **sodium chloride** (**NaCl**), potassium chloride (KCl), calcium chloride (CaCl) or magnesium chloride (MgCl).  
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: In (C1), the molecular weight of (H1) is 200000 - 4000000 (preferably 750000 - 2000000, especially 1000000) daltons. The concentration (w/v.%) of (H1) is 0.1 - 0.5 (preferably 0.01 - 0.3); (S1) is 0.003 - 0.02 (preferably 0.004 - 0.009, especially 0.005); **NaCl** is 0.1 - 1; KCl is 0.02 - 0.5;

CaCl<sub>2</sub> is 0.0005 - 0.1 and MgCl<sub>2</sub> is 0.0005 - 0.1. (C1) Has a pH of 6.8 - 8 (preferably 7 - 7.4, especially 7.2). (C1) Additionally comprises polyol demulcent (0.05 - 1, preferably 0.2 - 1%) and cellulose derivative demulcent (0.2 - 2.5%). The cellulose derivative demulcent has a molecular weight of less than or equal to 80000 (preferably 10000 - 40000).

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: In (C1), the balanced salts comprises **sodium chloride (NaCl)**, potassium chloride (KCl), calcium chloride (CaCl) or magnesium chloride (MgCl).

TECHNOLOGY FOCUS - POLYMERS - Preferred Components: The polyol demulcent is glycerin, polyethylene glycol 300 (RTM), polyethylene glycol 400 (RTM), polysorbate 80 (RTM) or propylene glycol. The cellulose derivative demulcent is carboxymethylcellulose sodium, hydroxyethyl cellulose, hydroxypropyl methylcellulose or methylcellulose.

ABEX

UPTX: 20040813

EXAMPLE - A composition comprised (w/v.%): **sodium hyaluronate** (0.02 - 0.3), **sodium chloride** (0.39), **boric acid** (0.6), **sodium borate** decahydrate (0.035), potassium chloride (0.14), calcium chloride dihydrate (0.006), magnesium chloride hexahydrate (0.0006), purite (stabilized oxy-chloro complex) (0.005), 1N **sodium hydroxide** (ph 7.2), 1N hydrochloric acid (pH 7.2) and purified water (balanced).

L118 ANSWER 2. OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2004-225251 [21] WPIX

CR 2000-303615 [26]; 2002-635204 [68]

DNC C2004-088927

TI Antimicrobial composition, e.g. liquid ophthalmic composition, and as gel composition for treating skin disorder, e.g. wounds, includes chlorite compound, and peroxy compound.

DC B06 D21 D22

IN **KARAGOEZIAN, H L**

PA (KARA-I) KARAGOEZIAN H L

CYC 1

PI US 2004037891 A1 20040226 (200421)\* 19 A61K033-40 &lt;--

ADT US 2004037891 A1 CIP of US 1999-412174 19991004, CIP of US 2001-911638 20010723, US 2003-614646 20030707

FDT US 2004037891 A1 CIP of US 6592907

PRAI US 2003-614646 20030707; US 1999-412174 19991004;  
US 2001-911638 20010723

IC ICM **A61K033-40**ICS **A61K033-14**

AB US2004037891 A UPAB: 20040525

NOVELTY - An antimicrobial composition comprises 0.001-0.2 weight% chlorite compound, and 0.001-0.05 weight% peroxy compound, and has a pH of 6-8.8.

ACTIVITY - Ophthalmological; Antiinflammatory; Vulnerary; Antiulcer; Antipsoriatic.

MECHANISM OF ACTION - None given.

USE - The invention is used as, e.g. liquid ophthalmic composition for treating dryness, infection caused by bacterial keratitis, and for directly cleaning a contact lens in pace on an eye; or as a gel composition. The gel composition is used for treating a skin disorder, e.g. wounds, burns, infections, ulcerations, cold sores, psoriasis, acne, and/or scars. (All claimed)

ADVANTAGE - The invention remains intact without degrading the chlorite compound into chlorine dioxide during storage at room temperature.

DESCRIPTION OF DRAWING(S) - The figure shows a graph of the non-production of chlorine dioxide at room temperature in the chloride/peroxide preparation.

Dwg.1/7

FS CPI  
 FA AB; GI; DCN  
 MC CPI: B05-A01A; B05-A01B; B05-B02C; B05-C07; **B05-C08**; B14-A01;  
 B14-C03; B14-N03; B14-N17; D08-B09A; D09-A; D09-A01

TECH UPTX: 20040326

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Component: The chlorite compound comprises a **metal chlorite**. The metal of the chlorite comprises sodium, potassium, calcium, or magnesium. The peroxy compound is **hydrogen peroxide**. The antimicrobial composition further comprises a **lubricant** comprising non-ionic polymeric **lubricants**, and/or anionic polymeric **lubricants**. The antimicrobial composition comprises 0.05-0.2 wt.% **lubricant**, 0.15 wt.% **boric acid**, 0.75 wt.% **sodium chloride**, 0.05-0.2 wt.% surfactant, hydrochloric acid or **sodium hydroxide**, and purified water. It further comprises 0.001-0.5 wt.% **hyaluronic acid**.

ABEX UPTX: 20040326

EXAMPLE - A human patient having psoriasis plaques present on both arms were treated by twice daily application to plaques on the left arm only, of a chlorite/peroxide solution having a formulation of 0.06% **sodium chloride**, 0.01% **hydrogen peroxide**, 2% hydroxypropyl methylcellulose, 0.15% **boric acid**, and hydrochloric acid or **sodium hydroxide**, and purified water. A commercially available 0.1% triamcinolone acetonide cream was twice daily application to plaques on the right arm only. The chlorite/peroxide treated psoriatic plaques began to become less severe within 24 hours and had disappeared within 3 days. However, the triamcinolone acetonide treated psoriatic plaques remained unchanged and inflamed during the two-week treatment period.

L118 ANSWER 3 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-401379 [38] WPIX

DNN N2003-320098 DNC C2003-106618

TI Composition used for delivery of osteogenic proteins used for treating bone defects, comprises osteogenic protein, calcium phosphate material and effervescent agent.

DC A96 B04 B07 P34

IN LI, R H; SEEHERMAN, H J

PA (AMHP) WYETH

CYC 101

PI US 2002187104 A1 20021212 (200338)\* 12 A61K038-17

WO 2002100331 A2 20021219 (200338) EN A61K000-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT  
 RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

EP 1404346 A2 20040407 (200425) EN A61K031-70

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
 RO SE SI TR

KR 2004019300 A 20040305 (200444) A61K038-17

BR 2002010282 A 20040720 (200451) A61K031-70

AU 2002314928 A1 20021223 (200452) A61K038-17

ADT US 2002187104 A1 Provisional US 2001-296818P 20010608, US 2002-160607  
 20020531; WO 2002100331 A2 WO 2002-US17798 20020606; EP 1404346 A2 EP  
 2002-741855 20020606, WO 2002-US17798 20020606; KR 2004019300 A KR  
 2003-716020 20031206; BR 2002010282 A BR 2002-10282 20020606, WO  
 2002-US17798 20020606; AU 2002314928 A1 AU 2002-314928 20020606

FDT EP 1404346 A2 Based on WO 2002100331; BR 2002010282 A Based on WO  
 2002100331; AU 2002314928 A1 Based on WO 2002100331

PRAI US 2001-296818P 20010608; US 2002-160607 20020531

IC ICM A61K000-00; A61K031-70; A61K038-17

ICS A61K033-06; **A61K033-14**; A61K033-42; A61K038-00; A61L009-04  
 AB US2002187104 A UPAB: 20030616  
 NOVELTY - Composition comprises osteogenic protein as a first biologically active agent, a calcium phosphate material as a carrier and an effervescent agent.

ACTIVITY - Osteopathic.

MECHANISM OF ACTION - None given.

USE - Used for delivery of osteogenic proteins for treating bone defects (claimed). The composition is used for bone regeneration and osseous augmentation, tissue repair and reinforcement in bone fractures, dental implants, bone implants, and prostheses.

ADVANTAGE - The composition is biocompatible, readily resorbable, and not detrimental to drug activity. The composition is injectable, malleable to enable injection or implantation into various sized fractures and defects, promotes homogenous distribution of bioactive materials throughout the matrix, permitting controlled release of the active substance and forms discrete macrogranules upon administration to the surgical or defective site. Granulation is desirable to facilitate cell migration and infiltration for secretion of extracellular bone matrix, and to provide access for vascularization. The composition also provides high surface area for enhanced resorption and release of active substance, and increased cell-matrix interaction.

Dwg.0/0

FS CPI GMPI

FA AB; DCN

MC CPI: A12-V01; A12-V02; B04-C01; B04-C02; B04-C03; B04-E01; B04-H06L;  
 B04-N02; B04-N04; B05-A01B; B05-B02A3; B05-B02C; B05-C04;  
 B05-C08; B14-N01

TECH UPTX: 20030616

TECHNOLOGY FOCUS - BIOLOGY - Preferred Material: The osteogenic protein is from the bone morphogenic protein (BMP) family, preferably BMP-4, BMP-5, BMP-7, BMP-10, BMP-12, BMP-13, preferably BMP-2 or BMP-6.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: The calcium phosphate material comprises hydroxyapatite, tricalcium phosphate, fluorapatite, or preferably poorly crystalline amorphous apatitic calcium phosphate. The poorly crystalline apatitic calcium phosphate has a calcium-to-phosphate ratio of less than 1:1.5, preferably 1:1.4. The effervescent agent is sodium bicarbonate contained in an amount of 10-40% (w/w) or a gas comprising carbon dioxide, air, nitrogen, helium, oxygen or argon. The composition also includes a supplementary material comprising salts, silicon dioxide, sodium oxide, calcium oxide, phosphorus (V) oxide, aluminum oxide, or calcium fluoride.

TECHNOLOGY FOCUS - POLYMERS - Preferred Material: The supplementary material comprises polysaccharides, peptides, proteins, amino acids, synthetic polymers, natural polymers, or surfactants. The supplementary material comprises solid structures of sponges, meshes, films, fibers, gels, filaments, microparticles or nanoparticles. The supplementary material comprises bioerodible polymers comprising collagen, glycogen, chitin, celluloses, starch, keratins, silk, nucleic acids, demineralized bone matrix, derivativized **hyaluronic acid**, polyanhydrides, polyorthoesters, polyglycolic acid, polylactic acid, their copolymers or their derivatives. The supplementary material comprises polyesters comprising alpha-hydroxycarboxylic acids such as poly(L-lactide), poly(D,L-lactide), polyglycolide, poly(lactide-co-glycolide), poly(D,L-lactide-co-trimethylene carbonate), polyhydroxybutyrate, or their derivatives.

ABEX UPTX: 20030616

EXAMPLE - A first calcium phosphate composition containing sodium bicarbonate (20 weight%) was prepared by adding to amorphous calcium phosphate (ACP) powder precursor. A second calcium phosphate paste was prepared in which polyethylene glycol (29 weight%) was added to the ACP powder precursor. The two ACP compositions were hydrated with water to

form two pastes, which formed macrogranules of 100-1000  $\mu$ m. The bone induced at 21 days using recombinant human bone morphogenetic protein-2 (rhBMP-2) delivered in the macrogranular (calcium phosphate) composition was greater than the control material (monolithic cement). The local retention of rhBMP-2 delivered using the macrogranular calcium phosphate materials was less than the control material (i.e. 30% versus 75%).

L118 ANSWER 4 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
 AN 2002-704826 [76] WPIX  
 DNN N2002-555553 DNC C2002-199820  
 TI New method for treating long-term nonhealing wounds comprises applying 3% **hydrogen peroxide** solution to wound, irradiating with infrared radiation, and applying **sodium chloride** solution on bandage.  
 DC B06 P32  
 IN BOYARINTSEVA, A V; KOREPANOVA, M V; KOROVYAKOV, A P; KRAVCHUK, A P; STRELKOV, N S; URAKOV, A L; URAKOVA, N A  
 PA (URAK-I) URAKOVA N A  
 CYC 1  
 PI RU 2187287 C1 20020820 (200276)\* A61F007-00  
 ADT RU 2187287 C1 RU 2000-133198 20001229  
 PRAI RU 2000-133198 20001229  
 IC ICM A61F007-00  
 ICS **A61K033-14**; A61P017-02  
 AB RU 2187287 C UPAB: 20021125  
 NOVELTY - New method for treating long-term nonhealing wounds comprises:  
 (a) applying 3% **hydrogen peroxide** solution;  
 (b) irradiating wound area with infrared radiation;  
 (c) applying a hypertonic solution comprising 2-4%-**sodium chloride** solution soaked on a bandage; and  
 (d) placing a warming element on the bandage and maintaining body temperature.  
 DETAILED DESCRIPTION - New method for treating long-term nonhealing wounds comprises:  
 (1) applying 3% **hydrogen peroxide** solution heated up to 37 deg. C on the wound;  
 (2) irradiating wound area for 15 minutes with infrared radiation using a Sollux lamp to develop constant tissue hyperemia without exceeding wound surface temperature of 42 deg. C;  
 (3) applying a hypertonic solution comprising 2-4%-**sodium chloride** solution heated up to 42 deg. C soaked on a bandage; and  
 (4) placing a warming element on the bandage and maintaining a temperature within 37 deg. C for the whole period until the next pharmacothermal procedure.  
 USE - For treating long-term nonhealing wounds.  
 ADVANTAGE - The method accelerates the removal of purulentnecrotic masses and metabolism of granulating tissue.  
 Dwg.0/0  
 FS CPI GMPI  
 FA AB  
 MC CPI: B05-A01B; B05-C07; **B05-C08**; B11-C09; B14-N17B

L118 ANSWER 5 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN  
 AN 2002-635204 [68] WPIX  
 CR 2000-303615 [26]; 2004-225251 [21]  
 DNC C2004-013371  
 TI Antimicrobial liquid ophthalmic and dermatological composition containing chlorite and peroxy compounds, useful e.g. for treating eye infections and for disinfection.  
 DC B05 D21  
 IN **KARAGOEZIAN, H L**  
 PA (KARA-I) KARAGOEZIAN H L

CYC 101  
 PI US 2002064565 A1 20020530 (200268)\* 13 A61K033-40 <--  
 WO 2003009802 A2 20030206 (200311) EN A61K000-00  
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TR TZ UG ZM ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
 DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
 KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT  
 RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW  
 US 6592907 B2 20030715 (200348) A61K033-40 <--  
 EP 1418881 A2 20040519 (200433) EN A61K007-20  
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
 RO SE SI TR  
 AU 2002322298 A1 20030217 (200452) A61K033-40 <--  
 ADT US 2002064565 A1 CIP of US 1999-412174 19991004, US 2001-911638 20010723;  
 WO 2003009802 A2 WO 2002-US19951 20020624; US 6592907 B2 CIP of US  
 1999-412174 19991004, US 2001-911638 20010723; EP 1418881 A2 EP  
 2002-756279 20020624, WO 2002-US19951 20020624; AU 2002322298 A1 AU  
 2002-322298 20020624  
 FDT EP 1418881 A2 Based on WO 2003009802; AU 2002322298 A1 Based on WO  
 2003009802  
 PRAI US 2001-911638 20010723; US 1999-412174 19991004  
 IC ICM A61K000-00; A61K007-20; **A61K033-40**  
 ICS **A61K033-14**; A61K033-20  
 AB US2002064565 A UPAB: 20040813  
 NOVELTY - An antimicrobial liquid ophthalmic composition containing  
 chlorite compound and peroxy compound, its use for treating eye infections  
 and cleaning contact lenses, and for providing antibacterial activity, are  
 new.  
 DETAILED DESCRIPTION - An antimicrobial liquid ophthalmic composition  
 for direct application onto the eye or onto a contact lens on the eye,  
 comprises (as weight%): 0.020-20% chlorite compound and 0.005-0.01% peroxy  
 compound, the composition having pH 7.0 and 7.8.  
 INDEPENDENT CLAIMS are included for:  
 (1) the use of the composition for treating an eye infection;  
 (2) cleansing a contact lens in place on an eye;  
 (3) providing antibacterial activity against gram-positive and  
 gram-negative bacterial activity;  
 (4) providing broad spectrum synergistic antibacterial activity;  
 (5) providing simultaneous antibacterial, anti-proteolytic,  
 anti-endotoxin, and anti-exotoxin activity at an affected site; and  
 (6) controlling inflammation, hyperemia and corneal edema.  
 ACTIVITY - Ophthalmological; antibacterial; antipsoriatic;  
 antiseborrheic; dermatological; vulnerary.  
 The antibacterial effect of (a) 400ppm **sodium**  
**chlorite** alone; (b) 200ppm **hydrogen peroxide**  
 alone; and (c) 400ppm **sodium chlorite** and 200ppm  
**hydrogen peroxide**, against *Staphylococcus haemolyticus*  
 were determined. Results for log reduction in bacteria after 1 hour and 2  
 hours respectively were: (a) 0.11 and 1.01; (b) 0.20 and 0.23; and (c)  
 0.69 and 2.43.  
 MECHANISM OF ACTION - Proteolytic enzyme inhibitors; endotoxin  
 inhibitors; exotoxin inhibitors.  
 USE - The compositions are useful for disinfection of articles or  
 surfaces (e.g. contact lenses), antisepsis of skin or other body parts,  
 prevention or minimization of scarring, treatment or prophylaxis of dermal  
 disorders (e.g. wounds, burns, infections, cold sores, ulcerations,  
 psoriasis, scar forming lesions, acne), and treatment of ophthalmic  
 disorders (e.g. infection, inflammation, dry eye, allergic conjunctivitis,  
 and wound healing).  
 ADVANTAGE - Use of an in-eye contact lens disinfecting solution  
 avoids the inconvenience of cleaning the lenses outside the eye, also the  
 risk of lens loss, tearing or contamination.

Dwg.0/0  
 FS CPI  
 FA AB; DCN  
 MC CPI: B05-C07; B05-C08; B14-A01; B14-D07C; B14-L06; B14-N17B;  
 B14-N17C; B14-N17D; D08-B09; D09-C01A  
 TECH UPTX: 20021022  
 TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Compounds: The chlorite compound is a **metal chlorite**, preferably sodium, potassium, calcium or **magnesium chlorite**. The peroxy compound is **hydrogen peroxide**.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The composition may further comprise a **lubricant**, preferably a polymeric **lubricant** and/or anionic polymeric **lubricant**; and a block polymer based surfactant.  
 A preferred composition comprises (as wt.%): 0.005-0.10% **sodium chlorite**; 0.005-0.01% **hydrogen peroxide**; 0.05-0.2% **lubricant**; 0.15% **boric acid**; 0.75% **sodium chloride**; 0.05-0.2% surfactant; **HCl** or **NaOH** to adjust pH, and water to volume, and may also comprise 0.001-0.5% **hyaluronic acid**.

ABEX UPTX: 20021022  
 EXAMPLE - A disinfecting in-eye solution was prepared comprising: **sodium chlorite** 0.02%, **hydrogen peroxide** 0.01%, methylcellulose A4M 0.075%, **hyaluronic acid** 0.075-0.1%, **boric acid** 0.15%, **sodium chloride** USP 0.75%, pluronic 127 0.75%, **HCl** or **NaOH** to adjust pH to 7.4, and water. Two subjects wore Acuvue disposable contact lenses continuously for 2 weeks with occasional removal and cleaning with commercially available cleaning solutions followed with a saline rinse. After 14 days, the lenses became gritty and uncomfortable, and were discarded. The subjects then used new Acuvue lenses, with daily application of disinfecting in-eye solution (3 times daily), without removing or touching the lenses. The subjects were able to wear the lenses for 3-4 weeks before replacement.

L118 ANSWER 6 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2002-552517 [59] WPIX

DNC C2002-156976

TI External preparation e.g. cosmetics and bath preparation, contains liquid mixture of secondary alkaline water and secondary acidic water, obtained by electrolyzing aqueous solution containing **sodium chloride**.

DC B04 D21

PA (KANE) KANEBO LTD

CYC 1

PI JP 2002145787 A 20020522 (200259)\* 6 A61K033-14 <--

ADT JP 2002145787 A JP 2000-335403 20001102

PRAI JP 2000-335403 20001102

IC ICM A61K033-14

ICS A61K007-00; A61K007-48; A61K035-02; A61P017-00

AB JP2002145787 A UPAB: 20020916

NOVELTY - The external preparation contains a liquid mixture of secondary alkaline water and/or secondary acidic water, obtained by electrolyzing primary alkaline water and primary acidic water after mixing both in sealed condition, which are produced respectively from the cathode and anode side, when electrolysis of aqueous solution dissolved with **sodium chloride** is carried out.

USE - Used as cosmetic and bath preparation.

ADVANTAGE - The external preparation has germicidal action and irritation feeling is not observed during use.

DESCRIPTION OF DRAWING(S) - The figure shows schematic diagram explaining the electrolyzed water manufacturing apparatus. (Drawing

includes non-English language text).

Dwg.1/1

FS

CPI

FA

AB; GI; DCN

MC

CPI: B05-A01B; B14-N17; B14-R01; D08-B09A1

TECH

UPTX: 20020916

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Solution: The aqueous solution dissolved with **sodium chloride** is ocean deep water and its diluted water.

ABEX

UPTX: 20020916

EXAMPLE - Ocean deep water taken from coast of Toyama Bay was subjected to primary electrolysis in a primary electrolytic cell comprising anode and cathode chamber separated by diaphragm of an ion exchange resin. Primary acidic water and primary alkaline water were respectively produced from anode and cathode sides. The primary alkaline and acidic water were mixed under sealed condition and secondary electrolysis was performed at direct electrolytic current of 7A and electrolytic voltage of 2.8V. The secondary alkaline water had pH of 10.1, chlorine concentration of 100 ppm, **hydrogen peroxide** concentration of 25 ppm and oxidation reduction potential of 699 mV. The secondary acidic water had pH of 6.3, chlorine concentration of 200 ppm, **hydrogen peroxide** concentration of 50 ppm and oxidation reduction potential of 1002 mV. The mixture of secondary acidic and alkaline water had pH of 8.3, chlorine concentration of 150 ppm, **hydrogen peroxide** concentration of 50 ppm and oxidation reduction potential of 801 mV. An external preparation was prepared by blending (in mass%) secondary acidic water (50), glycerol (3), citric acid (0.2) and remainder of water. Sterilization activity of 10 ml of composition was tested with 0.1 ml of culture solution containing *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Bacillus subtilis*. The mixture was cultured using SCD agar medium for 72 hours at 32 degrees C. After 3 minutes, 15 minutes and 30 minutes the colony count was measured to be less than 10, 10 and 10 respectively for each microorganism, showing the favorable germicidal action of the external preparation.

L118 ANSWER 7 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-303615 [26] WPIX

CR 2002-635204 [68]; 2004-225251 [21]

DNC C2000-092146

TI Liquid or gel preparation containing chlorite and peroxide is are used for disinfection, antiseptis, treatment of wounds, dermatological and opthalmic conditions.

DC A18 A96 B06 D22 P34

IN KARAGEOZIAN, H L;

PA (KARA-I) KARAGEOZIAN H L; (KARA-I) KARAGEOZIAN H L

CYC 87

PI WO 2000019981 A1 20000413 (200026)\* EN 38 A61K009-127

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES

FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS

LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ

TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 9964169 A 20000426 (200036)

EP 1119347 A1 20010801 (200144) EN A61K009-127

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT

RO SE SI

US 6488965 B1 20021203 (200301) A61K033-20 <--

JP 2003522109 W 20030722 (200350) 36 A61K033-20

MX 2001003507 A1 20030701 (200366) A01N025-00

ADT WO 2000019981 A1 WO 1999-US23291 19991006; AU 9964169 A AU 1999-64169 19991006; EP 1119347 A1 EP 1999-951810 19991006; WO 1999-US23291 19991006; US 6488965 B1 Cont of US 1998-169620 19981008, US 2000-722919 20001127; JP 2003522109 W WO 1999-US23291 19991006, JP 2000-573343 19991006; MX



2001003507 A1 WO 1999-US23291 19991006, MX 2001-3507 20010405  
 FDT AU 9964169 A Based on WO 2000019981; EP 1119347 A1 Based on WO 2000019981;  
 JP 2003522109 W Based on WO 2000019981; MX 2001003507 A1 Based on WO  
 2000019981

PRAI US 1999-412174 19991004; US 1998-169620 19981008;  
 US 2000-722919 20001127

IC ICM A01N025-00; A61K009-127; A61K033-20  
 ICS A01N059-08; A01N059-14; A61K009-00; A61K009-06; A61K009-08;  
 A61K009-107; A61K009-52; A61K009-58; A61K009-62; A61K009-66;  
 A61K033-00; **A61K033-40**; A61K047-00; A61K047-04; A61K047-32;  
 A61K047-34; A61K047-36; A61K047-38; A61K047-44; A61L002-18;  
 A61P009-14; A61P017-02; A61P017-06; A61P027-02; A61P027-14;  
 A61P031-02; A61P031-04; A61P031-22

AB WO 200019981 A UPAB: 20040525

NOVELTY - Preparation (A) for disinfection, polymeric **lubricant** preservation, antiseptis, treatment of wounds, burns, infections and disorders of the skin or mucus membranes, and prevention or deterrence of scar formation.

DETAILED DESCRIPTION - Preparation (A) for disinfection, polymeric **lubricant** preservation, antiseptis, treatment of wounds, burns, infections and disorders of the skin or mucus membranes, and prevention or deterrence of scar formation comprises:

- (a) 0.02-0.20 weight% of chlorite (I); and
- (b) 0.005-0.01 weight% of a peroxy compound (II).

ACTIVITY - Antibacterial; vulnerary; dermatological; antipsoriatic; antiseborrheic; ophthalmic; synergist.

The antipsoriatic effect of (A) was tested using a gel composition comprising **sodium chlorite** (0.06 %), **hydrogen peroxide** (0.01 %), hydroxypropyl methyl cellulose (2.0 %), **boric acid** (0.15 %), hydrochloric acid (HCl) or **sodium hydroxide** (NaOH) to adjust pH to 7.4 and purified water; (A'). The effectiveness of (A') was compared against a 0.1% triamcinolone cream. After 24 hours of use of (A') psoriatic plaques had become less severe and had disappeared after 1 week. In comparison psoriatic plaques remained inflamed for the 2 week test period using the triamcinolone cream.

MECHANISM OF ACTION - None given.

USE - (A) may used for disinfection e.g. disinfection of contact lens, polymeric **lubricant** preservation, antiseptis, treatment of wounds, burns, infections and disorders of the skin or mucus membranes, prevention or deterrence of scar formation, ophthalmic conditions e.g. ophthalmic wound healing, allergic conjunctivitis or dry eye (claimed) and dermatological conditions e.g. ulcers, psoriasis or acne.

ADVANTAGE - (I) and (II) act synergistically.

Dwg.0/0

FS CPI GMPI

FA AB; DCN

MC CPI: A12-V01; A12-V03A; A12-W12; B05-C07; **B05-C08**; B12-M03;  
 B12-M07; B12-M10; B14-A01; B14-N03; B14-N17; B14-S09; D09-A01A

TECH UPTX: 20000531

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Preparation: (I) is a **metal chlorite** selected from sodium, potassium, calcium or **magnesium chlorite**. (I) is **hydrogen peroxide**. (A) may comprise a sustained delivery component (III) which limits the rate that (I) becomes available for the generation of oxygen. (III) comprises a polymer matrix or a liposome, preferably selected from a cellulose ester or it's salt, hydroxypropyl cellulose, methylhydroxyethyl cellulose, hydroxypropyl cellulose, hydroxyethyl cellulose, carboxymethyl cellulose, cellulose acetate, hydroxypropylmethyl cellulose phthalate, methacrylic acid-methyl methacrylate copolymer, methacrylic acid-ethyl acetate copolymer, polyvinylpyrrolidone, polyvinyl alcohol, **hyaluronic acid**, a phospholipid, cholesterol, dipalmitoyl phosphatidyl choline and dipalmitol phosphatidyl serine.

Preferred Formulation: A liquid preparation of (A) comprises **sodium chlorite** (0.005-0.10 %), **hydrogen peroxide** (0.05-0.01 %), Methocel A (RTM; 0.05 -0.2 %), **boric acid** (0.15%), **sodium chloride** (0.75 %), Pluronic F-68/F127 (RTM; 0.05-2.0 %), hydrochloric acid (HCl) or **sodium hydroxide** (NaOH) to adjust pH, and purified water to volume. A gel formulation of (A) comprises **sodium chlorite** (0.005-0.10 %), **hydrogen peroxide** (0.05-0.01 %), Methocel A (RTM; 0.05 -2.0 %), **boric acid** (0.15%), **sodium chloride** (0.75 %), Pluronic F-68/F127 (RTM; 0.05-2.0 %), hydrochloric acid (HCl) or **sodium hydroxide** (NaOH) to adjust pH, and purified water to volume.

ABEX UPTX: 20000531

EXAMPLE - A gel composition was produced comprising **sodium chlorite** (0.06 %), **hydrogen peroxide** (0.01 %), hydroxypropyl methyl cellulose (2.0 %), **boric acid** (0.15 %), hydrochloric acid (HCl) or **sodium hydroxide** (NaOH) to adjust pH to 7.4 and purified water.

L118 ANSWER 8 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-041180 [04] WPIX

DNC C2000-010949

TI Manufacture of an alkali **metal chlorite** of low carbonate content.

DC D15 E34 F06 F09

IN COWLEY, G; DICK, P D

PA (STER) STERLING CANADA INC; (SUPE-N) SUPERIOR PLUS INC

CYC 28

PI EP 963945 A1 19991215 (200004)\* EN 10 C01B011-10  
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

CA 2273667 A1 19991209 (200021) EN C01B011-10

ZA 9903884 A 20000927 (200050) 21 C01B000-00

US 6251357 B1 20010626 (200138) C01B011-10

EP 963945 B1 20030115 (200306) EN C01B011-10

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

DE 69904874 E 20030220 (200322) C01B011-10

ES 2194435 T3 20031116 (200381) C01B011-10

ADT EP 963945 A1 EP 1999-850102 19990609; CA 2273667 A1 CA 1999-2273667 19990607; ZA 9903884 A ZA 1999-3884 19990609; US 6251357 B1 Provisional US 1998-88542P 19980609, US 1999-327529 19990608; EP 963945 B1 EP 1999-850102 19990609; DE 69904874 E DE 1999-604874 19990609, EP 1999-850102 19990609; ES 2194435 T3 EP 1999-850102 19990609

FDT DE 69904874 E Based on EP 963945; ES 2194435 T3 Based on EP 963945

PRAI US 1998-88542P 19980609; US 1999-327529 19990608

IC ICM C01B000-00; C01B011-10

AB EP 963945 A UPAB: 20000124

NOVELTY - Alkali **metal chlorite** of low carbonate content is manufactured by reducing chlorate to generate chlorine dioxide and reacting the chlorine dioxide with alkali metal hydroxide and **hydrogen peroxide**.

DETAILED DESCRIPTION - The method comprises:

(1) generating chlorine dioxide in a first reaction zone by reduction of chlorate in an aqueous acid at boiling point under sub-atmospheric pressure;

(2) transferring the chlorine dioxide to a second reaction zone;

(3) reacting with aqueous alkali metal hydroxide and **hydrogen peroxide** as reducer; and

(4) recovering alkali **metal chlorite** of low carbonate content.

USE - The chlorite product is used in e.g. water treatment, pulp

bleaching, textile bleaching etc.

ADVANTAGE - The chlorite has a very low carbonate content. The product as a 37 weight % **Na chlorite** solution contains less than 0.5 weight %, preferably less than 0.3 weight % Na carbonate; and the product as solid 80 weight % **Na chlorite** contains less than 1 weight %, preferably less than 0.6 weight % Na carbonate.

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: D04-A01; D04-A01P; D06-A; D11-B01B; E31-C; F03-B01; F05-A02B

TECH UPTX: 20000124

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Method: The alkali metal hydroxide is **NaOH** and the product is **sodium chlorite**. The ClO<sub>2</sub> is produced in the first reaction zone from a reaction mixture of: 1-5M preferably 2-3M chloride, 0.1-7M preferably 5-7M chlorate, and 0.05-5N preferably 0.1-2N total acid, using **H<sub>2</sub>O<sub>2</sub>** as reducer; or 0.1 M-saturation preferably 0.5-3.5M chlorate and 2-14N preferably 6-12N total acid, using **H<sub>2</sub>O<sub>2</sub>** as reducer. The ClO<sub>2</sub> is separated from Cl<sub>2</sub> before transferring to the second reaction zone. Both reaction zones are held at a sub-atmospheric pressure of 50-200 mm Hg, preferably 50-150 mmHg. The second zone is maintained at pH 11.8-13.0 preferably 12.0-12.6, with **H<sub>2</sub>O<sub>2</sub>** in excess at an ORP (potentiometric) value of -30 to -200 mV preferably -40 to -90 mV vs Ag/AgCl. The second reaction zone is a countercurrent packed tower.

TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred Method: The acid in the first reaction zone is sulfuric acid and an acidic sulfate byproduct from the first zone is passed as acid feed to a plant in which chlorate is reduced with methanol to form chlorine dioxide used for pulp bleaching.

ABEX UPTX: 20000124

EXAMPLE - A reaction medium of 6M NaClO<sub>3</sub>, 1M **NaCl** and 0.1N **HCl** is held at 73 degrees C at 190 mmHg pressure. The ClO<sub>2</sub> product is separated from Cl<sub>2</sub> and supplied to a chlorite reactor containing **H<sub>2</sub>O<sub>2</sub>** and alkali at 25 degrees C at a pressure below 200 mmHg. The product solution contains 37 weight % **Na chlorite** and 0.18 weight % Na carbonate.

L118 ANSWER 9 OF 9 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1982-22007E [11] WPIX

TI Treatment of burns - with aqueous solution of glycerine, (hypo)chlorite, perborate, peroxide, hydrochloric acid and sulphuric acid.

DC B05

PA (LASO-I) LASO F

CYC 1

PI US 4317814 A 19820302 (198211)\* 3

PRAI US 1980-158650 19800612

IC A61K031-17; A61K033-40

AB US 4317814 A UPAB: 19930915

Burns on a human are treated to alleviate pain and reduce scar formation by applicn., to the burn area, of a wet compress containing an aqueous mixture

(A)

of (a) glycerine (I) and (b) a solution formed by adding 80-120 g **sodium chlorite**, 90-130 g sodium hypochlorite (13% aqueous solution), 5-7.5 cc of 37.7% **HCl**, 2-4.5 cc 98.15% H<sub>2</sub>SO<sub>4</sub>, 4-12 g Na or K perborate and 8-15 g Na peroxide or an equivalent amount of K peroxide, **H<sub>2</sub>O<sub>2</sub>** or K or Na percarbonate to 1000 cc water.

Pref. in addition to admin. of (A) component (b) is also administered orally pref. 4 times per day at 3-10 drops per admin. (A) pref. contains 6wt.% (I), 4wt.% (b) and 90wt.% water.

FS CPI

FA AB

MC CPI: B05-B02C; B05-C04; B05-C05; B05-C07; B05-C08; B10-E04C; B12-A07; B12-D01

=> d his

(FILE 'HOME' ENTERED AT 13:22:18 ON 02 SEP 2004)  
SET COST OFF

FILE 'REGISTRY' ENTERED AT 13:22:26 ON 02 SEP 2004

L1 1 S HYDROGEN PEROXIDE/CN  
L2 1 S 13898-47-0  
SEL RN  
L3 68 S E1/CRN  
L4 33 S L3 AND (NA OR K OR CA OR MG)/ELS  
L5 4 S L4 AND 2/NC  
L6 5 S L4 AND H2O  
L7 2 S BORIC ACID/CN  
L8 2 S (SODIUM HYDROXIDE OR HYDROCHLORIC ACID)/CN  
L9 1 S WATER/CN  
L10 2 S (HYALURONIC ACID OR HYALURONIC ACID, SODIUM SALT)/CN

FILE 'HCAPLUS' ENTERED AT 13:26:00 ON 02 SEP 2004

L11 2801 S L2,L5,L6  
L12 2736 S (NA OR K OR CA OR MG OR SODIUM OR POTASSIUM OR CALCIUM OR MAG  
L13 193 S METAL CHLORITE  
L14 24182 S CHLOROUS ACID OR CHLORITE  
L15 24457 S L11-L14  
E METAL CHLORITE/CT  
L16 82855 S L1  
L17 174895 S H2O2 OR HYDROGEN PEROXIDE  
L18 760 S L15 AND L16,L17  
E PEROX/CT  
E E59+ALL  
L19 611 S E6,E5+NT AND L15  
E E4+ALL  
L20 925 S E2+NT AND L15  
L21 49 S PEROXY AND L15  
L22 1206 S L18-L21  
L23 56 S L22 AND (L7 OR BORIC ACID OR BORATE)

FILE 'REGISTRY' ENTERED AT 13:31:42 ON 02 SEP 2004

L24 1 S 14998-27-7  
L25 25 S 14998-27-7/CRN

FILE 'HCAPLUS' ENTERED AT 13:32:19 ON 02 SEP 2004

L26 87 S L24 AND L16,L17  
L27 204 S L24 AND E2+NT  
L28 216 S L26,L27  
L29 21 S L28 AND (L7 OR BORIC ACID OR BORATE)  
L30 58 S L23,L29  
L31 1257 S L22,L28

FILE 'REGISTRY' ENTERED AT 13:33:39 ON 02 SEP 2004

L32 1 S SODIUM CHLORIDE/CN

FILE 'HCAPLUS' ENTERED AT 13:33:43 ON 02 SEP 2004

L33 12 S L31 AND H3BO3  
L34 59 S L30,L33  
L35 100 S L31 AND (L32 OR (NA OR SODIUM)())CHLORIDE OR NA CL)  
L36 301 S L31 AND (L8 OR HCL OR NAOH OR (NA OR SODIUM)())HYDROXIDE OR HC  
L37 28 S L34 AND L35,L36  
L38 4 S L37 AND L35 AND L36  
SEL DN AN 3  
L39 1 S L38 AND E1-E3

L40 4 S L31 AND L10  
 L41 4 S L31 AND (HYALURONIC ACID OR (NA OR SODIUM) ( )HYALURON?)  
 L42 5 S L39-L41  
 L43 2 S L42 AND (L7 OR BORIC ACID)  
 L44 4 S L30 AND L42  
 L45 5 S L42,L43,L44  
 E KARAGOEZIAN H/AU  
 L46 3 S E4  
 L47 3 S L46 AND L31  
 L48 5 S L45,L47  
 L49 235 S L18 AND (HCL OR NAOH OR NACL OR H3BO3 OR BORIC ACID OR SODIUM  
 L50 4 S L49 AND LUBRIC?  
 E LUBRICANT/CT  
 E E5+ALL  
 L51 3 S L49 AND E2+NT  
 L52 31 S L49 AND SURFACTANT  
 E SURFACTANT/CT  
 E E29+ALL  
 L53 29 S L49 AND E2+OLD,NT,PFT,RT  
 L54 42 S L50-L53  
 L55 46 S L48,L54  
 L56 30 S L55 AND (PD<=19991004 OR PRD<=19991004 OR AD<=19991004)  
 L57 30 S L47,L56  
 L58 27 S L56 NOT L47  
 L59 10 S L58 AND PH  
 SEL DN AN 6  
 L60 1 S L59 AND E1-E3  
 SEL DN AN L59 9  
 L61 1 S E4-E5 AND L59  
 L62 5 S L47,L60,L61 AND L11-L23,L26-L31,L33-L61  
 L63 1043 S L31 AND (PD<=19991004 OR PRD<=19991004 OR AD<=19991004)  
 L64 3 S L63 AND EYE+OLD,NT,PFT,RT/CT  
 L65 5 S L63 AND EYE, DISEASE+OLD,NT,PFT,RT/CT  
 L66 6 S L63 AND CONTACT (L)LENS  
 L67 8 S L64-L66  
 SEL DN AN 4-8  
 L68 3 S L67 NOT E7-E21  
 L69 5 S L62,L68  
 L70 59 S L63 AND (WOUND OR BURN OR ?INFECT? OR ?ULCER? OR COLD SORE OR  
 L71 11 S L63 AND SKIN+OLD,NT,PFT,RT/CT  
 L72 10 S L63 AND SKIN, DISEASE+OLD,NT,PFT,RT/CT  
 L73 4 S L63 AND (BURN? OR ULCER? OR INFECT? OR ANTIINFECT?)/CW  
 L74 63 S L70-L73  
 L75 4 S L69 AND L74  
 L76 59 S L74 NOT L69,L75  
 SEL DN AN 7 13 16 50  
 L77 4 S L76 AND E22-E33  
 L78 9 S L69,L75,L77  
 L79 0 S L78 AND NAOCL  
 L80 3 S L78 AND NACLO#  
 L81 2 S L78 AND CLO2  
 L82 9 S L78,L80,L81  
 L83 8 S L82 AND (HCL OR NAOH OR NACL OR PH OR H2O OR WATER)  
 L84 9 S L82,L83

FILE 'HCAPLUS' ENTERED AT 14:06:26 ON 02 SEP 2004

FILE 'WPIX' ENTERED AT 14:08:28 ON 02 SEP 2004

L85 3 S (US2004037891 OR US2002064565 OR US6488965)/PN  
 E KARAGOEZIAN H/AU  
 L86 3 S E4,L85  
 L87 397 S A61K033-40/IPC  
 L88 32296 S (HYDROGEN PEROXIDE OR H2O2)/BIX

```

      E HYDROGEN PEROXIDE/DCN
      E E3+ALL
L89   16725 S E2 OR 1732/DRN
L90   51724 S L87-L89 OR (B10-A04 OR C10-A04 OR E10-A04B OR B05-C08 OR C05-
L91   5352 S E10-A04B?/MC
L92   52114 S L87-L91
L93   117 S L92 AND A61K033-14/IPC
L94   194 S L92 AND ((METAL OR NA OR K OR CA OR MG OR SODIUM OR POTASSIUM
      E SODIUM CHLORITE/DCN
      E E3+ALL
L95   149 S L92 AND (E2 OR 1754/DRN)
      E POTASSIUM CHLORITE/DCN
      E E3+ALL
L96   10 S L92 AND E2
      E CALCIUM CHLORITE/DCN
      E MAGNESIUM CHLORITE/DCN
      E CALCIUM CHLORITE/CN
L97   1 S E3
      E RA1077/DCN
L98   5 S E3-E8 AND L92
      E MAGNESIUM CHLORITE/CN
L99   368 S L93-L98
      E HYALURONIC ACID/CN
      E E3+ALL
      E HYALURONIC ACID/DCN
      E E3+ALL
L100  1656 S E2
L101  1169 S E4
      E SODIUM HYALURON/DCN
      E E4+ALL
L102  219 S E2
L103  5 S L99 AND (L100-L102 OR (HYALURONIC ACID OR (NA OR SODIUM) ()HY
      E BORIC ACID/DCN
      E E3+ALL
L104  6374 S E2 OR 1894/DRN
L105  1064 S E4
L106  12 S L99 AND (L104 OR L104 OR (BORIC ACID OR BORATE)/BIX)
      E SODIUM CHLORIDE/DCN
      E E3+ALL
L107  78 S L99 AND (E2 OR 1706/DRN OR (NACL OR SODIUM CHLORIDE)/BIX)
      E SODIUM HYDROXIDE/DCN
      E E3+ALL
L108  56 S L99 AND (E2 OR 1514/DRN OR (NAOH OR SODIUM HYDROXIDE)/BIX)
      E HYDROCHLORIC ACID/DCN
      E MONOHYDROCHLORIC ACID/DCN
L109  18 S HCL/BIX AND L99
L110  10 S LUBRIC?/BIX AND L99
L111  5 S L103,L86
L112  4 S L111 AND L106-L110
L113  5 S L111,L112
L114  14 S L106,L110 NOT L113
L115  123 S L107,L108,L109 NOT L110-L114
L116  71 S L115 AND L88,L89
      SEL DN AN 8 11 23 65
L117  4 S L116 AND E1-E8
L118  9 S L113,L117 AND L85-L117

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